

Health Technology Assessment (HTx). To improve stakeholder engagement in modernizing HTA, it is important to keep paying attention to project management, relationships, and how to facilitate fora and meetings to improve mutual understanding. Two factors to pay more attention to are branding of the coproduction and consideration of formal structures.

PP118 A Survival Analysis Of The Lag Times In The Publication Of Network Meta-Analyses

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Introduction. The use of inconsistent and outdated information may significantly compromise healthcare decision-making. We aimed to assess the extent of lag times in the publication and indexing of network meta-analyses (NMAs).

Methods. Searches for NMAs on drug interventions were performed in PubMed (May 2020). Lag times were measured as the time between the last systematic search and the date of the article's submission, acceptance, online publication, indexing, and Medical Subject Heading (MeSH) allocation. Correlations between lag times and time trends were calculated by means of Spearman's rank correlation coefficient. Time-to-event analyses were performed considering independent variables such as geographical origin, journal impact factor, Scopus CiteScore, and open access status.

Results. We included 1,245 NMAs. The median time from last search to article submission and publication was 6.8 months and 11.6 months, respectively. Only five percent of authors updated their literature searches after submission. There was a very slight decreasing historical trend for acceptance ($r = -0.087$; $p = 0.01$), online publication ($r = -0.08$; $p = 0.008$), and indexing lag times ($r = -0.080$; $p = 0.007$). Journal impact factor influenced the MeSH allocation process (log-rank $p = 0.02$). Slight differences were observed for acceptance, online publication, and indexing lag times when comparing open access and subscription journals.

Conclusions. Authors need to update their literature searches before submission to reduce evidence production time. Peer reviewers and editors should ensure that authors comply with NMA standards and encourage the development of living meta-analyses.

PP119 Innovative Screening System For COVID-19 Using Application Of Artificial Intelligence For Telemedicine

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Introduction. Artificial intelligence (AI) and innovative technology offer opportunities for enhanced health care during the COVID-19 pandemic. Populations living in low-income countries do not have access to reverse transcription polymerase chain reaction (RT-PCR) testing for COVID-19 and, thus, depend on the scarce resources of their health system. In this context, an automated screening system for COVID-19 based on AI for a telemedicine platform could be directed towards alleviating the current lack of trained radiologists who can interpret computed tomography images at countryside hospitals.

Methods. This descriptive study was carried out in Paraguay by the Telemedicine Unit of the Ministry of Public Health and Social Welfare in collaboration with the Department of Biomedical Engineering and Imaging of the Health Science Research Institute and the University of the Basque Country. The utility of the screening system for COVID-19 was analyzed by dividing the results from two tailored AI systems implemented in 14 public hospitals into four likelihood levels for COVID-19.

Results. Between March and October 2020, 911 COVID-19 diagnoses were performed in 14 regional hospitals (62.6% were men and 37.4% were women). The average age of the patients diagnosed with COVID-19 was 50.7 years; 59.1% were aged 19 to 59 years. The two AI systems used have different background information for detecting COVID-19. The most common findings were severe pneumonia and bilateral pneumonia with pleural effusions. The role of computed tomography was to find lesions and evaluate the effects of treatment. The sensitivity of AI for detecting COVID-19 was 93%.

Conclusions. AI technology could help in developing a screening system for COVID-19 and other respiratory pathologies. It could speed up medical imaging diagnosis at regional hospitals for patients with suspected infection during the COVID-19 pandemic and rationalize scarce RT-PCR and specialized human resources in low-income countries. These results must be contextualized with the local or regional epidemiological profile before widespread implementation.

PP126 Radiofrequency Ablation For Metastatic Spinal Lesions

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Introduction. About 70 percent of metastatic breast, lung, and prostate cancers affect the bones. When this phase of the disease affects the spine, the mobility and quality of life of patients are severely impaired. Radiofrequency ablation (RFA) has become a feasible option in the palliative treatment of vertebral metastases due to its minimal invasiveness and short procedure time. This health technology assessment report aimed to identify, evaluate, and synthesize evidence on the safety, effectiveness, and cost effectiveness of RFA for vertebral metastases.

Methods. A systematic search was conducted to identify literature published from December 2016 to July 2019 in the following

databases: Medline, Embase, the Cochrane Library, and the [Centre for Reviews and Dissemination](#). Systematic reviews, randomized and non-randomized controlled trials, and case series studies evaluating the efficacy and safety of RFA in patients with vertebral metastases were included.

Results. Sixteen studies were included: two systematic reviews, 13 case series studies, and one comparative study. None of the systematic reviews identified any randomized controlled trials. Of the 14 included primary studies, 10 evaluated RFA in combination with vertebroplasty, three evaluated RFA in combination with kyphoplasty, and one study evaluated a combination of RFA and radiation therapy. In all cases, the evaluated patients had different types of cancer (e.g., breast, lung, or liver). The follow-up periods varied between the studies from one day to 12 months. The most commonly used RFA devices were the STAR™ Tumour Ablation System (Merit Medical Systems) and the OsteoCool™ Radiofrequency Ablation System (Medtronic).

Conclusions. RFA reduces pain, improves functional capacity, and provides greater local control of disease, potentially giving patients a higher quality of life, even in the context of metastatic disease. Although there is evidence on the safety and efficacy of this technology for the palliative treatment of vertebral metastases, more studies with higher methodological quality are needed. There were no studies available on the cost effectiveness of RFA for this indication.

PP133 Developing A Novel Multifaceted Graphical Visualization For Treatment Ranking Within An Interactive Network Meta-Analysis Application

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Introduction. Network meta-analysis (NMA) is a key methodology for comparing the effectiveness of multiple interventions or treatments simultaneously. This project aimed to ascertain current methods and visualizations for treatment ranking within an NMA framework and to subsequently develop a novel graphic within MetaInsight (an interactive NMA web application), to aid clinicians and stakeholders when making decisions regarding the “best” intervention(s) for their patient(s).

Methods. Current literature on the methodology or visualization of treatment ranking published in the last 10 years was collated and studied. Based on the literature, a novel graphical visualization was developed using RShiny (RStudio, PBC) and integrated within MetaInsight, which is currently hosted on shinyapps.io.

Results. Bayesian analyses produce rank probabilities from which mean or median rank and surface under the cumulative ranking curve can be calculated. For frequentist analyses the p-value is available. The simpler methods may be easier to interpret, but they are often more unstable and do not encompass the whole analysis (and vice versa). To aid interpretation and facilitate sensitivity analysis, an interactive graphic was developed that presents rankings alongside treatment effect and study quality results.

Conclusions. Treatment ranking is useful, but the results should be interpreted cautiously, and the visualization should be

transparent and all-encompassing. A ‘living’ version of MetaInsight, with treatment ranking, would allow interested parties to follow the evidence base as it grows.

PP140 Barriers And Prospects For The Development Of Hospital-Based Health Technology Assessment In Kazakhstan

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Introduction. The experience of implementing a hospital-based health technology assessment (HB-HTA) system in Kazakhstan is currently represented by only one organization, an independent HB-HTA unit established in 2015 in the Medical Center Hospital of the President’s Affairs Administration (the Hospital). Despite the demonstrated positive experience of the Hospital, the widespread implementation of the HB-HTA system in Kazakhstan has experienced some barriers that must be considered before further development can occur.

Methods. To determine the barriers to developing and implementing HB-HTA in Kazakhstani hospitals, data from the Hospital’s experience were obtained through a survey of Kazakhstan hospitals, conducted on behalf of the Ministry of Health Care. An official response was received from 29 hospitals. During the survey and discussions with hospital staff using the “brainstorming” method, several barriers to the development of HB-HTA in Kazakhstan were identified.

Results. Barriers at the system level included the lack of monitoring of the HB-HTA system at the national and regional levels and a lack of methodological support. Organizational barriers included a critically small number of HTA experts and the need for additional logistical support and funding from hospitals. The subjective factors we attributed to the rejection of the HB-HTA system by hospital management were the underestimation of lost profits and that HTA is a tool for promoting a transparent and open system for making managerial decisions.

Conclusions. Despite some barriers, the development of HB-HTA in Kazakhstan is a promising area. The heads of key hospitals in Kazakhstan demonstrated a readiness and understanding of the need to use the principles of health technology assessment and clinical and economic analysis to promote the active transfer and implementation of innovative medical technologies.

PP145 VALIDATE Methodology For A Medication-Related Clinical Decision Support System: Innovating Or Going Back To Basics?

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